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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,982	10/22/2001	Hiroki Kuribayashi	041514-5151	7217

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EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 05/10/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,982

Applicant(s)

KURIBAYASHI, HIROKI

Examiner

Peter Vincent M Agustin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-13 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Election/Restrictions

1. Claims 1-9 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors, e.g.,

Claim 10, line 14: "pre-pits" should be --pre-pit--.

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US 5,815,486) in view of Ota (US 5,559,784).

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Kobayashi et al. discloses a recording apparatus (figure 10) for recording/rewriting information by irradiating a beam of light to a recording medium (figure 10, element 1), said recording apparatus including a circuit for generating a recording mark signal (figure 9, element 23) for recording a recording mark of a predetermined length in pre-pit regions while the beam of light is irradiated on the pre-pit regions. However, Kobayashi et al. does not disclose that the recording medium comprises a plurality of recording layers sequentially layered through spacer layers, wherein each of said recording layers is made of a material that changes reflectance upon irradiation of a beam of light and thereby is capable of recording information as a change in reflectance, each of said plurality of recording layers is provided with alternately and adjacently aligned information rewritable regions and pre-pit regions where predetermined information has been written, and average reflectance of said rewritable regions is different from average reflectance of said pre-pit regions.

Ota discloses a recording medium (figure 16) comprising a plurality of recording layers (72a-72c) sequentially layered through spacer layers (74), wherein each of said recording layers is made of a material that changes reflectance upon irradiation of a beam of light and thereby is capable of recording information as a change in reflectance (column 5, lines 12-14), each of said plurality of recording layers is provided with alternately and adjacently aligned information rewritable regions (76) and pre-pit regions (75) where predetermined information has been written, and average reflectance of said rewritable regions is different from average reflectance of said pre-pit regions (column 13, lines 39-41). It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have used the multi-layer recording

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medium of Ota for the apparatus of Kobayashi et al., the motivation being to obtain higher recording density.

6. Claims 11 & 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. & Ota as applied to claim 10 above, and further in view of Maeda et al. (hereafter Maeda) (US 5,808,988).

For a description of Kobayashi et al. & Ota, see the rejection above. However, Kobayashi et al. & Ota do not disclose a circuit for detecting said rewritable regions and said pre-pit regions.

Maeda discloses a circuit for detecting rewritable regions and pre-pit regions (figure 16, element 716). It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have added the circuit of Maeda to the apparatus of Kobayashi et al. & Ota, the motivation being to provide a means to distinguish address information from actual data.

Furthermore, in regard to claim 12, Maeda discloses a reproduction circuit that in the obvious combination would inherently detect a portion that makes the average reflectance of pre-pit regions different from the average reflectance of rewritable regions as in Ota.

7. Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. & Ota as applied to claim 10 above, and further in view of Masui (JP 2000339694 A).

For a description of Kobayashi et al. & Ota, see the rejection above. However, Kobayashi et al. & Ota do not disclose a circuit for detecting the recording marks already recorded in said pre-pit regions, and a circuit for, when no recorded recording marks are detected, controlling an optical pick-up to record the recording marks in said pre-pit regions, and when the recorded

recording marks are detected, controlling the optical pick-up not to over-write the recording marks in said pre-pit regions.

Masui (see abstract) discloses a circuit for detecting the recording marks already recorded in said pre-pit regions, and a circuit for, when no recorded recording marks are detected, controlling an optical pick-up to record the recording marks in said pre-pit regions, and when the recorded recording marks are detected, controlling the optical pick-up not to over-write the recording marks in said pre-pit regions. It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have added the circuits of Masui to the apparatus of Kobayashi et al. & Ota, the motivation being to prevent overwriting into already recorded areas.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yasuda et al. (US 6,511,788) discloses a multi-layered optical disc. Figures 5 & 6 show different reflectances of different regions of the disc.

Ogasawara et al. (US 2002/0034108) discloses a pickup device for recording to a multi-layer optical medium.

Kobayashi et al. (5,805,564) discloses in figure 15 a recording medium comprising alternately provided address areas and data areas.

Nagino et al. (JP 09237435 A) discloses an optical recording medium that reduces cross-talk amount.

Kanome et al. (US 4,954,380) discloses an optical recording medium having alternately provided portions 5 & 6 with different reflectivities.

Allowable Subject Matter

9. Claim 14 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claim 14, no prior art of record alone or in combination discloses or suggests a recording apparatus for recording into a multi-layer recording medium comprising a circuit for generating a recording mark signal in each pre-pit region, wherein **a non-modulated continuous recording mark is further recorded in a portion having a higher reflectance than the average reflectance of said pre-pit regions.**

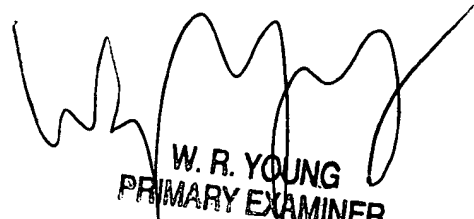
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is (703) 305-8980. The examiner can normally be reached on Monday thru Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PVA
04/02/2004



W. R. YOUNG
PRIMARY EXAMINER